

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر نوفمبر



Important questions on unit two



First Multiple choice questions

- 1 The greatest common factor in the polynomial $14x^3y - 7xy^2 - 63xy$ is
(a) $7x$ (b) $7y$ (c) $7xy$ (d) $7x^2y^2$
-
- 2 If $5xy + 5ab = 30$, then $xy + ab =$
(a) 5 (b) 6 (c) 10 (d) 15
-
- 3 $27a^3 + 18 =$ $(3a^3 + 2)$
(a) $9a$ (b) 18 (c) $3a$ (d) 9
-
- 4 If $2xy^2 + 2x^2y + 2xyz = 24$, $(y + x + z) = 6$, then $xy =$
(a) 2 (b) 4 (c) 3 (d) 8
-
- 5 $-15a^2b^2 + 9ab^3 =$
(a) $3(a^2b^2 + ab^3)$ (b) $-3ab^2(5a - 3b)$
(c) $3a^2b(5a - 3b)$ (d) $5ab(3a - 9b)$
-
- 6 $3a(2x + y) - 5b(2x + y) =$
(a) $(2x + y)(3a - 5b)$ (b) $(2x - y)(3a + b)$
(c) $(2x - y)(3a + 5b)$ (d) $(3a + b)(2x + 5y)$
-
- 7 If $(3a + b) = 5$, $(2m - n) = 8$, then $6ma + 2mb - 3na - nb =$
(a) 40 (b) 20 (c) 13 (d) 80
-
- 8 The solution set of the equation : $7x^2 + x = 0$ in $\mathbb{R}$ is
(a) $\{0, 7\}$ (b) $\{0, \frac{1}{7}\}$ (c) $\{-\frac{1}{7}, 0\}$ (d) $\emptyset$
-
- 9 If $(x - 1)$ is one of the factors of the trinomial $x^2 - 4x + 3$, then the other factor is
(a) $x + 3$ (b) $x + 4$ (c) $x + 1$ (d) $x - 3$
-
- 10 If $(x + 3y)$ is one of the factors of the trinomial $x^2 + xy - 6y^2$, then the other factor is
(a) $x - 2y$ (b) $x - 3y$ (c) $x + 2y$ (d) $x + 6y$

- 11 If $x^2 - ax + 12$ is factorizable, then a can be equal to
 (a) -1 (b) 4 (c) 7 (d) 1
-
- 12 If $x^2 + 7x + b$ is factorizable, then b can be equal to
 (a) 3 (b) 4 (c) 18 (d) -18
-
- 13 $x^2 + 5x + 4 = \dots\dots\dots$
 (a) $(x+4)(x+1)$ (b) $(x+5)(x-1)$
 (c) $(x+3)(x+2)$ (d) $(x-1)(x-4)$
-
- 14 The solution set of the equation : $x^2 - 6x - 16 = 0$ in $\mathbb{R}$ is
 (a) $\{2, 6\}$ (b) $\{2, 8\}$ (c) $\{-2, 8\}$ (d) $\{2, -8\}$
-
- 15 The number that can be added to the expression : $x^2 + 8x + 5$ to be factorizable is
 (a) 1 (b) 2 (c) 4 (d) 5
-
- 16 $x^2 + 3x - 18 = \dots\dots\dots$
 (a) $(x-6)(x+3)$ (b) $(x-3)(x-6)$
 (c) $(x-3)(x+6)$ (d) $(x+3)(x+6)$
-
- 17 If $x^2 + 8x + 12 = (x+a)(x+2)$, then $a = \dots\dots\dots$
 (a) 10 (b) 8 (c) 6 (d) 4
-
- 18 If $x + 3y = 5$, $2x - y = 3$, then $2x^2 + 5xy - 3y^2 = \dots\dots\dots$
 (a) 8 (b) 15 (c) -8 (d) -15
-
- 19 $3x^2 + 20x + 17 = \dots\dots\dots$
 (a) $(x+3)(x+17)$ (b) $(3x+17)(x+1)$
 (c) $(3x-1)(x-17)$ (d) $(3x-17)(x-1)$
-
- 20 If $(x-5)$ is one of the factors of the trinomial $7x^2 - 34x - 5$, then the other factor is
 (a) $7x-1$ (b) $7x+1$ (c) $x+7$ (d) $x-7$
-
- 21 If $6a^2 + ka + 10 = (2a-5)(3a-2)$, then $k = \dots\dots\dots$
 (a) 15 (b) 19 (c) -19 (d) 4

- 22** The solution set of the equation : $2x^2 - 9x + 9 = 0$ in $\mathbb{R}$ is
- (a) $\{3\}$ (b) $\{2, 3\}$ (c) $\{\frac{3}{2}, 3\}$ (d) $\{-\frac{3}{2}, -3\}$
-
- 23** If $5a^2 - 12ab + 7b^2 = 75$, $5a - 7b = -25$, then $a - b =$
- (a) -3 (b) 3 (c) -5 (d) 5
-
- 24** Which of the following polynomials represents a perfect square ?
- (a) $x^2 + 7x + 4$ (b) $x^2 - 9x + 9$
(c) $x^2 + 24x + 144$ (d) $x^2 - 10x - 25$
-
- 25** If the trinomial $ax^2 + 8x + 1$ represents a perfect square , then $a =$
- (a) 4 (b) 8 (c) 12 (d) 16
-
- 26** If $x^2 + kx + 25$ represents a perfect square , then $k =$
- (a) ± 5 (b) ± 25 (c) ± 10 (d) ± 50
-
- 27** The value of k that makes : $4x^2 - 28x + k$ a perfect square is
- (a) 14 (b) 49 (c) ± 49 (d) 7
-
- 28** A square with an area of $(9x^2 + 48x + 64) \text{ cm}^2$ has a side length of cm
- (a) $x + 8$ (b) $3x + 4$ (c) $3x + 8$ (d) $x + 24$
-
- 29** $\frac{1}{4}x^2 + 3x + 9 =$
- (a) $(\frac{1}{2}x + 3)^2$ (b) $(2x + 3)^2$ (c) $(x + 9)^2$ (d) $(\frac{1}{2}x - 3)^2$
-
- 30** The missing term in the trinomial : $9y^2 + \dots + 16$ to be a perfect square is
- (a) $12y$ (b) $24y$ (c) $48y$ (d) $24y^2$
-
- 31** If $x^2 + 2xy + y^2 = 25$, then $(x + y) =$
- (a) 10 (b) ± 10 (c) 5 (d) ± 5
-
- 32** The solution set of the equation : $x^2 - 12x + 36 = 0$ in $\mathbb{R}$ is
- (a) $\{6\}$ (b) $\{-6\}$ (c) $\{6, -6\}$ (d) $\{4, 9\}$
-
- 33** $(73)^2 + 2 \times 27 \times 73 + (27)^2 =$
- (a) 100 (b) $1,000$ (c) $10,000$ (d) $100,000$

34 $25x^2 - 90xy + 81y^2 = \dots\dots\dots$

(a) $(5x + 9y)^2$

(b) $(5x - 9y)^2$

(c) $(9x + 5y)^2$

(d) $(9x - 5y)^2$

35 $x^2 - 9 = \dots\dots\dots$

(a) $(x - 3)^2$

(b) $(x + 3)^2$

(c) $(x + 3)(x - 3)$

(d) $(x - 1)(x + 9)$

36 $3x^2 - 3 = \dots\dots\dots$

(a) $(x - 3)^2$

(b) $(x - 3)(x + 3)$

(c) $3(x - 1)(x + 1)$

(d) $3(x - 1)^2$

37 $x^2(a + 2b) - y^2(a + 2b) = \dots\dots\dots$

(a) $(a + 2b)(x + y)(x - y)$

(b) $(x^2 + y^2)(a - 2b)$

(c) $(a + 2b)(x + y)^2$

(d) $(a - 2b)(x + y)(x - y)$

38 If $x^2 - 4y^2 = 21$, $x - 2y = 3$, then $x + 2y = \dots\dots\dots$

(a) 18

(b) 63

(c) 7

(d) 9

39 $x^3 - x = \dots\dots\dots$

(a) $(x^2 - x)^2$

(b) $x(x - 1)^2$

(c) $(x^2 - 1)(x - 1)$

(d) $x(x + 1)(x - 1)$

40 $49a^2b^4 - 4 = \dots\dots\dots$

(a) $(7ab^2 - 2)(7ab^2 + 2)$

(b) $(7ab^2 - 2)^2$

(c) $(7a^2b + 2)(7a^2b - 2)$

(d) $(7a^2b^2 + 2)^2$

41 The solution set of the equation : $x^2 - 25 = 0$ in $\mathbb{R}$ is $\dots\dots\dots$

(a) $\{-5, 5\}$

(b) $\{5\}$

(c) $\{-5\}$

(d) $\emptyset$

42 The solution set of the equation : $x^2 + 81 = 0$ in $\mathbb{R}$ is $\dots\dots\dots$

(a) $\{9\}$

(b) $\{-9\}$

(c) $\{-9, 9\}$

(d) $\emptyset$

43 The solution set of the equation : $x^2 + 9 = 25$ in $\mathbb{R}$ is $\dots\dots\dots$

(a) $\{-5, 5\}$

(b) $\{-3, 3\}$

(c) $\{-4, 4\}$

(d) $\emptyset$

44 The solution set of the equation : $x^3 = 36x$ in $\mathbb{R}$ is

- (a) $\{-6, 6\}$ (b) $\{0, -6, 6\}$ (c) $\{6\}$ (d) $\{0, 6\}$
-

45 $(75)^2 - (25)^2 = 100 \times$

- (a) 100 (b) 50 (c) 25 (d) 75
-

46 $x^3 + 1 = (x + 1)(\dots\dots\dots)$

- (a) $x^2 - 1$ (b) $x^2 + 1$ (c) $x^2 - x + 1$ (d) $x^2 + x + 1$
-

47 $(x - 2)(x^2 + 2x + 4) =$

- (a) $x^3 - 8$ (b) $x^2 - 8$ (c) $(x - 2)^2$ (d) $(x + 2)^2$
-

48 If $a^3 - b^3 = 64$, $a^2 + ab + b^2 = 16$, then $a - b =$

- (a) 8 (b) -4 (c) 4 (d) -8
-

49 If $x^3 + y^3 = 28$, $x + y = 2$, then $x^2 - xy + y^2 =$

- (a) 48 (b) 14 (c) 2 (d) 7
-

50 If $x^3 - k = (x - 5)(x^2 + 5x + 25)$, then $k =$

- (a) 125 (b) 25 (c) 5 (d) 15
-

51 If $x^3 + a = (x + 3)(x^2 - 3x + 9)$, then $\sqrt[3]{a} =$

- (a) 27 (b) 4 (c) 3 (d) 81
-

52 If $(2a + 3)$ is one of the factors of the polynomial $8a^3 + 27$, then the other factor is

- (a) $4a^2 + 9$ (b) $4a^2 - 6a + 9$ (c) $4a^2 + 6a - 9$ (d) $(2a - 3)^2$
-

53 $2ax + bx + 2ay + by =$

- (a) $(a + b)(x + y)$ (b) $(2a + b)(x + y)$ (c) $(2a - b)(x - y)$ (d) $(a - b)(x - y)$
-

54 $mn + 5n + 7m + 35 =$

- (a) $(m + 5)(n + 7)$ (b) $(m + 7)(n + 5)$
(c) $(5m + 7)(7n + 5)$ (d) $(m - 5)(n - 7)$
-

55 $y^3 + y^2 + y + 1 =$

- (a) $(y^2 + y)^2$ (b) $(y^2 + 1)^2$ (c) $(y + 1)(y^2 + 1)$ (d) $(y + 1)^3$
-

56 If $b^2 + bc + cd + db = 15$, $b + c = 3$, then $b + d = \dots\dots\dots$

- (a) 12 (b) 45 (c) 10 (d) 5

57 $a^2 + 4ab + 4b^2 - 49 = \dots\dots\dots$

- (a) $(a + 2b - 7)(a + 2b + 7)$ (b) $(a + 2b + 7)^2$
(c) $(a - 2b - 7)^2$ (d) $(a - 2b - 7)(a + 2b + 7)$

58 When completing the square for the expression : $(x^2 + 16)$, we add $\dots\dots\dots$

- (a) $\pm 4x$ (b) $\pm 8x$ (c) $\pm 4x^2$ (d) $\pm 8x^2$

59 $a^4 + 4b^4 = \dots\dots\dots$

- (a) $(a^2 + 2b^2 - 2ab)(a^2 + 2b^2 + 2ab)$ (b) $(a^2 + 2b)^2$
(c) $(a^2 - 2b^2)(a^2 + 2b^2)$ (d) $(a^2 + 2a^2b^2)^2$

60 If $(9m^2 + 2n^2 - 6mn)$ is one of the factors of the polynomial : $81m^4 + 4n^4$, then the other factor is $\dots\dots\dots$

- (a) $9m^2 + 2n^2 - 6mn$ (b) $9m^2 + 2n^2 + 6mn$
(c) $9m + 2n - 6mn$ (d) $9m + 2n + 6mn$

Second Essay questions

1 Factorize each of the following completely :

- | | |
|---------------------------------|------------------------------|
| ① $27x^3 + 9x$ | ② $8x^2 - 24$ |
| ③ $7a^3b^4 - 21ab^3 + 28a^2b^2$ | ④ $-4x^3 + 12x + 16x^2$ |
| ⑤ $6a^4 - 5a^2$ | ⑥ $3x(2a - 5) + y(2a - 5)$ |
| ⑦ $5a(2a - 3b) + 4b(2a - 3b)$ | ⑧ $(x + 5)^2 - y(x + 5)$ |
| ⑨ $3(a - 4) + (a - 4)^2$ | ⑩ $(x + 2)^3 - 2(x + 2)^2$ |
| ⑪ $x^2 + 8x + 15$ | ⑫ $x^2 - 7x + 12$ |
| ⑬ $x^2 + 13x - 30$ | ⑭ $x^2 - 3x - 18$ |
| ⑮ $3x^2 + 7x + 2$ | ⑯ $2x^2 + x - 6$ |
| ⑰ $2x^2 - 5x + 3$ | ⑲ $2x^2 - 5x - 12$ |
| ⑱ $25x^2 - 30x + 9$ | ⑳ $3x^2 + 24x + 48$ |
| ㉑ $49x^2 + 70xy + 25y^2$ | ㉒ $20x^4 + 60x^2y^2 + 45y^4$ |

$$\textcircled{23} 9x^2 - 16$$

$$\textcircled{25} 8x^3 + 125$$

$$\textcircled{27} a^3 + 0.008$$

$$\textcircled{29} bx + by + cx + cy$$

$$\textcircled{31} a^2 + 2ab + b^2 - c^2$$

$$\textcircled{33} 81x^4 + 4y^4$$

$$\textcircled{35} 1 - 4x^2$$

$$\textcircled{37} x^4 - 13x^2 + 36$$

$$\textcircled{24} 3x^2 - 75$$

$$\textcircled{26} 3x^3 - 81$$

$$\textcircled{28} ax + bx + 5a + 5b$$

$$\textcircled{30} xy + 5x + 7y + 35$$

$$\textcircled{32} x^4 + 4y^4$$

$$\textcircled{34} x^4 + 8x^2 + 16$$

$$\textcircled{36} 6x^2 + y(2y - 7x)$$

$$\textcircled{38} (x^2 + 4)(x + 1) - 5(x + 1)$$

2 Find the solution set of each of the following equations in $\mathbb{R}$:

$$\textcircled{1} 3x^2 + 6 = 0$$

$$\textcircled{3} x^4 + x^2 = 0$$

$$\textcircled{5} (2x + 3)^2 + 2x - 3 = 0$$

$$\textcircled{7} x^2 - 7x - 18 = 0$$

$$\textcircled{9} x^2 - x = 12$$

$$\textcircled{11} (x + 7)(x + 3) = -3$$

$$\textcircled{13} 3x^2 - 2x - 8 = 0$$

$$\textcircled{15} -2x^2 + 13x - 15 = 0$$

$$\textcircled{17} a^2 + 6a + 9 = 0$$

$$\textcircled{19} 16b^2 + 9 = 24b$$

$$\textcircled{21} x^2(x + 1)^2 - (x + 1)^2 = 0$$

$$\textcircled{23} 9x^2 - 1 = 0$$

$$\textcircled{25} x^2 - 2x - 4 = 0$$

$$\textcircled{2} 2x^2 + x = 0$$

$$\textcircled{4} x(x - 2) + 5(x - 2) = 0$$

$$\textcircled{6} x^2 + x - 6 = 0$$

$$\textcircled{8} x^2 - 8x + 15 = 0$$

$$\textcircled{10} x(x + 9) = 10$$

$$\textcircled{12} 5x - x^2 = -24$$

$$\textcircled{14} 7x^2 + 5 = 12x$$

$$\textcircled{16} x^3 + 6x^2 + 5x = 0$$

$$\textcircled{18} 4m^2 - 4m + 1 = 0$$

$$\textcircled{20} 25x^2 - 4(5x - 1) = 0$$

$$\textcircled{22} x^2 - 4 = 0$$

$$\textcircled{24} x^2 + 12x + 7 = 0$$

3 Use factorizing to facilitate finding the result of each of the following :

$$\textcircled{1} 15 \times 12 - 15 \times 10$$

$$\textcircled{3} (64)^2 + 2 \times 64 \times 36 + (36)^2$$

$$\textcircled{5} (48)^2 - (42)^2$$

$$\textcircled{2} 7 \times 27 + 7 \times 18 - 7 \times 25$$

$$\textcircled{4} (99)^2 + 2 \times 99 + 1$$

4 The area of a rectangle is $(x^2 + 9x - 22) \text{ cm}^2$, find possible dimensions for this rectangle in terms of x

1 Choose the correct answer from those given :

1 If $\triangle ABC \cong \triangle XYZ$, $m(\angle A) + m(\angle B) = 100^\circ$, then $m(\angle Z) = \dots\dots\dots$

- (a) 50° (b) 80° (c) 100° (d) 180°

2 If $\triangle ABC \cong \triangle XYZ$, the perimeter of the triangle $ABC = 18 \text{ cm}$, $BC = 6 \text{ cm}$, then $XY + XZ = \dots\dots\dots$

- (a) 3 cm (b) 6 cm (c) 12 cm (d) 24 cm

3 If $3x + 3y = 18$, then $2x + 2y = \dots\dots\dots$

- (a) 2 (b) 6 (c) 12 (d) 54

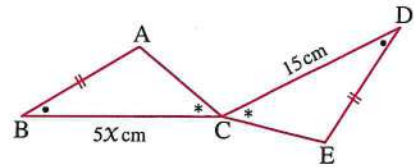
4 If ABCD is a rectangle , then $\overline{AC} \cong \dots\dots\dots$

- (a) $\overline{AB}$ (b) $\overline{BC}$ (c) $\overline{AD}$ (d) $\overline{BD}$

5 In the given figure :

What is the value of x ?

- (a) 3 (b) 5
(c) 10 (d) 15



6 If the polynomial $(16x^2 - 40x + k^2)$ is a perfect square , then $k = \dots\dots\dots$

- (a) 5 (b) -5 (c) ± 5 (d) 8

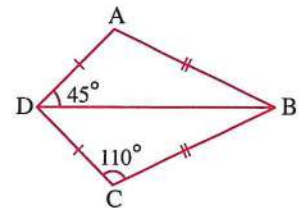
2 In the given figure :

$AD = CD$, $AB = CB$,

$m(\angle ADB) = 45^\circ$, $m(\angle C) = 110^\circ$

1 Prove that : $\triangle ABD \cong \triangle CBD$

2 Find : $m(\angle A)$

**3 Factorize each of the following completely :**

1 $x^2 - 3x - 10$

2 $25 - 9x^2$

3 $y^3 - 8$

November tests



Test 1

1 Choose the correct answer from those given :

1 If $x^2 - b^2 = (x - 3)(x + 3)$, what is the value of b ?

- (a) ± 1 (b) ± 3 (c) ± 6 (d) ± 9

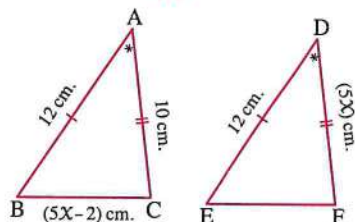
2 When completing the square for the expression : $(x^2 + 9)$, we add

- (a) $\pm 3x$ (b) $\pm 6x$ (c) $\pm 9x$ (d) $\pm 12x$

3 In the given figure :

What is the length of $\overline{EF}$?

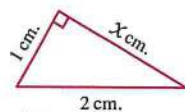
- (a) 6 cm (b) 8 cm
(c) 10 cm (d) 12 cm



4 In the given figure :

What is the value of x ?

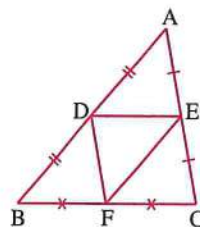
- (a) 1 (b) 3 (c) $\sqrt{5}$ (d) $\sqrt{3}$



5 In the given figure :

If the perimeter of $\triangle ABC$ is 18 cm ,
what is the perimeter of $\triangle DEF$?

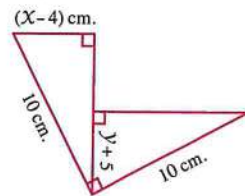
- (a) 6 cm (b) 12 cm
(c) 36 cm (d) 9 cm



6 In the given figure :

What is the value of $x - y$?

- (a) 9 (b) 6
(c) 5 (d) 1



2 Identify the type of the triangle based on its angles if the lengths of its sides are :
6 cm , 3 cm and 5 cm

3 Factorize each of the following completely :

1 $x^4 + 4y^4$

2 $20x^3 - 45x$

3 $x^2 - y^2 - 6x - 6y$

1 Choose the correct answer from those given :

1 $x^2 - a x + b x - a b = \dots\dots\dots$

(a) $(x - a)(x - b)$

(b) $(x - a)(x + b)$

(c) $(x + a)(x - b)$

(d) $(x + a)(x + b)$

2 If $x^2 - y^2 = -16$, $x - y = -2$, then $x + y = \dots\dots\dots$

(a) 2

(b) 4

(c) 8

(d) 16

3 In the given figure :

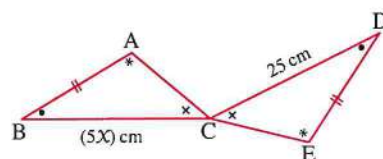
What is the value of x ?

(a) 5

(b) 10

(c) 20

(d) 25



4 In the given figure :

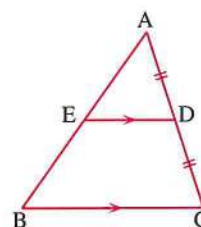
If the length of $\overline{EB} = 10$ cm ,
what is the length of $\overline{AB}$?

(a) 20 cm

(b) 10 cm

(c) 7.5 cm

(d) 5 cm



5 Which of the following numbers could be the lengths of the sides of an obtuse-angled triangle ?

(a) 24 , 10 , 27

(b) 2.5 , 2 , 1.5

(c) 7 , 7 , 7

(d) 20 , 10 , $10\sqrt{3}$

6 In the given figure :

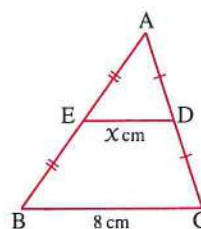
What is the value of x ?

(a) 16

(b) 8

(c) 4

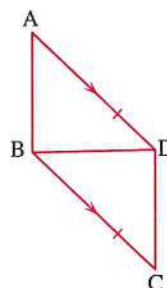
(d) 2



2 In the given figure :

$\overline{AD} \parallel \overline{BC}$, $\overline{AD} \cong \overline{CB}$

Prove that : $\triangle ABD \cong \triangle CDB$



3 Factorize each of the following completely :

1 $m^3 + n^3 - m - n$

2 $x^4 - 11x^2 + 1$

3 $x^2 - \frac{4}{81}$

Test

3

1 Choose the correct answer from those given :

1 If the polynomial $(kx^2 - 12x + 9)$ is a perfect square, what is the value of k ?

- (a) 4 (b) ± 4 (c) 2 (d) ± 2

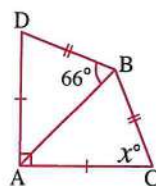
2 If $(x^2 + 2x + 2)$ is one of the factors of the expression $(x^4 + 4)$, what is the other factor?

- (a) $x^2 - 2x + 2$ (b) $x^2 - 2x - 2$ (c) $x^2 + x + 2$ (d) $x^2 - x + 2$

3 In the given figure :

What is the value of x ?

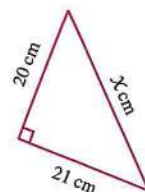
- (a) 66 (b) 45
(c) 34 (d) 69



4 In the given figure :

What is the value of x ?

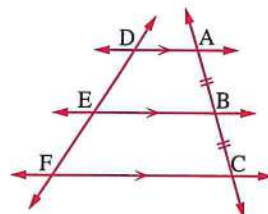
- (a) 41 (b) 29
(c) $\sqrt{41}$ (d) $\sqrt{29}$



5 In the given figure :

If the length of $\overline{DF}$ is 15 cm, what is the length of $\overline{EF}$?

- (a) 10 cm (b) 7.5 cm
(c) 5 cm (d) 2.5 cm

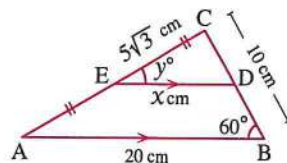


6 Which of the following numbers could be the lengths of the sides of an acute angled triangle?

- (a) 4, 4, $4\sqrt{2}$ (b) 6, 8, 10 (c) 7.5, 3.7, 8 (d) 6, 6, 9

2 In the given figure :

Find the value of each of : x and y



3 Factorize each of the following completely :

1 $k^2 - 36m^2$

2 $a^2x + b^2x + b^2 + a^2$

3 $x^3 + 27$

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر نوفمبر



Q1 : Factor each of the following.

1 $X^2 - 15Xy + 36y^2$

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.....

2 $b^2 + 3bl - 10l^2$

3 $X^2 + 5Xy + 6y^2$

.....
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4 $X^2 - 5Xy - 24y^2$

5 $X^2 - 17X + 30$

.....
.....

6 $X^2 - 7X + 12$

7 $X^2 - 5X - 14$

.....
.....

8 $X^2 + 11X + 30$

9 $X^2 - 6X - 16$

.....
.....

10 $X^2 - 3X - 10$

11 $X^2 + 8X + 15$

.....
.....

12 $X^2 + 4X - 12$

13 $y^2 + y - 6$

.....
.....

14 $2X^2 + 3X + 1$

15 $a^2 + 22a - 75$

16 $8X^2 + 28X - 60$

17 $a^2 + 15a - 34$

18 $6X^2 - 21X + 18$

19 $8X^3 - 27X^2 - 20X$

20 $2a^2 + 28a + 96$

21 $5X^2 - 10X - 15$

22 $25m^2 - 10m + 15$

23 $3a^2 + 7a + 2$

24 $X^2 - 3X - 28$

25 $6X^2 - 11 + 3$

26 $3X^2 - 14X - 5$

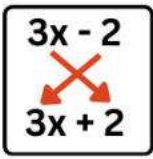
27 $5K^2 - 7K + 2$

28 $5X^2 - 4X - 12$

29 $3X^2 + 10X + 8$

30 $5a^2 - 18a + 16$

Q2 : Choose the correct answer :-

- 1 If $(x - 5)$ is one of the factors of the trinomial: $2x^2 - 7x - 15$ What is the other factor?
- (a) $x + 3$ (b) $2x - 3$ (c) $2x + 3$ (d) $x - 3$
- 2 Which of the following factorizations represents the factorization of the polynomial $9x^2 - 9x - 4$?
- (a)  (b)  (c)  (d) 
- 3 Which of the following represents the factorization of the polynomial $x^2 + x - 20$?
- (a) $(x - 4)(x + 5)$ (b) $(x + 4)(x + 5)$ (c) $(x - 4)(x - 5)$ (d) $(x + 4)(x - 5)$
- 4 If $(x - 3)(x + 5) = 0$ Which of the following is correct ?
- (a) $x = 5$ or $x = 3$ (b) $x = -5$ or $x = 3$ (c) $x = 5$ or $x = -3$ (d) $x = -5$ or $x = 3$
- 5 If : $3x - 2y = 6$, $2x + 3y = 5$ Find the value of: $(x^2 + 5xy - 6y^2)$
- (a) 10 (b) 11 (c) 12 (d) 30
- 6 If : $(x + 3)(x + b) = x^2 + ax + 15$ What is the value of $a + b$?
- (a) 5 (b) 8 (c) 13 (d) 40
- 7 If $(x - a)(x - b) = 2x^2 - 11x + 28$ What is the value of $a + b$?
- (a) 5 (b) 8 (c) 13 (d) 40

Q1 : Analyze the following:

1 $6X^3 + 24X^2 + 24X$

2 $9a^2 + 6ab + b^2$

3 $8y^2 - 12y + 12$

4 $m^2 - 2m + 1$

5 $25X^2 - 10X + 1$

6 $\frac{1}{4}X^2 - 2X + 4$

7 $9X^2 + 6ab + b^2$

8 $X^2 + 24X^2 + 24X$

Q2 : Complete the missing term :

1 $a^2 - 6a + \text{-----}$

2 $4X^2 \text{ ----- } +1$

3 $4a^2 + \text{-----} 36b$

Q3 :Indicate which of the following quantities is a perfect square.

1 $9X^2 + 15Xy + 25y^2$

2 $a^2 + 9$

3 $8y^2 - 12y + 12$

4 $l^2 - 8ml + 16m^2$

5 $X^2 - 12X + 36$

6 $25X^2 + 15Xy + 25y^2$

Q1: Analyze each of the following:

1 $(X + 3)^3 + 64$

2 $4X^4 + 4000X$

3 $X^3 - 25X$

4 $a^2 - 4b^2$

5 $X^4 + 64X$

6 $X^3 + 8$

7 $64X^3 - 125y^3$

8 $25 - 9X^2$

9 $X^4 - 81$

10 $X^2 - \frac{4}{81}$

11 $X^2 - 4$

12 $49y^2 - 1$

13 $64X^3 + 27$

14 $2X^2 + 16$

15 $X^3 - 1$

16 $8X^3 - 125$

17 $125X^3 + \frac{1}{8}$

18 $\frac{1}{5}X^2 - 5$

19 $2XY^4 + 16YX^4$

20 $-27X^2 + 75$

21 $1 - 4a^2b^2$

22 $X^3 + 27$

23 $K^2 - 36m^2$

24 $y^3 - 8$

25 $212y - y^3$

26 $20X^3 + 16$

27 $54X^3 + 16$

28 $a^3 - 125$

29 $512X^3 - Y^3$

30 $3X^3 - 81$

31 $a^2 - 25$

32 $225C^2 - b^2$

33 $16X^2 - 9$

34 $49y^2 - 1$

35 $2X^2 - 32$

36 $X^4 - 1$

Q2 :Answer the following :-

1 Solve the following equation in R :

$$X^3 = 25X$$

- 2** Data is stored in storage units in the form of cubic units.
A first-generation storage unit can hold $216x^3$ data units."
A second-generation storage unit has a capacity of $343y^3$ data units.
Find the sum of their capacities in the form of a product of factors.
-
-
-
-

Q3: Choose the correct answer :-

- 1** If $ax^3 - 27 = (2x - 3)(4x + bx + 9)$, What is the value of a b ?
(a) 6 (b) 12 (c) 24 (d) 48
- 2** If $x - y = -2$, $x^2 - y^2 = -16$, What is the value of Y, x ?
(a) 2 (b) 4 (c) 8 (d) 16
- 3** If $ax^2 - b = (3x - 2)(3x + 2)$, What is the value of a + b ?
(a) -13 (b) 13 (c) -5 (d) 5
- 4** If $x^2 - b^2 = (x - 3)(x + 3)$, What is the value of b ?
(a) ± 1 (b) ± 3 (c) ± 6 (d) ± 9

Q1 : Choose the correct answer :-

- 1 If $x^3 + 5x^2 - 4x - 20 = (x + a)(x + b)(x + c)$,What is the value of $a + b + c$?
 (a) 2 (b) 5 (c) 7 (d) 9
- 2 If: $x^2 + a = 12$, $x + b = 5$,What is the numerical value of the expression $(x^3 + bx^2 + ax + ab)$?
 (a) 7 (b) 17 (c) 30 (d) 60
- 3 when completing the square for the expression : $(x^2 + 9)$ we add to it -----
 (a) 3x (b) 6x (c) 9x (d) 12x
- 4 when completing the square for the expression : $(x^2 + 12x)$ we add to it -----
 (a) 9 (b) 36 (c) 9 (d) 36
- 5 If $xy + 5x + 7y + 35 = (x + a)(y + b)$, What is the value of $a - b$?
 (a) 2 (b) -2 (c) 12 (d) -12
- 6 If $(x^2 + 2x + 2)$ One of factors of the expression $(X^4 + 4)$ What is the other factor?
 (a) $x^2 - 2x + 2$ (b) $x^2 - 2x - 2$ (c) $x^2 + x + 2$ (d) $x^2 - x + 2$
- 7 $x^2 - ax + bx - ab =$ -----
 (a) $(x + a)(x + b)$ (b) $(x + a)(x - b)$ (c) $(x - a)(x + b)$ (d) $(-a)(x - b)$

Q2 : Factor the following trinomial using factoring by grouping:-

$$2x^2 + 5x + 3$$

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Q3 :Completely factor each of the following:-

1 $64X^4 + y^4$

2 $5a^2b - 10a^2b^2 + 4b^2 - 8b^3$

3 $X^2 - a^2 - 2X + 1$

4 $4X^2 - 12Xy + 9y^2 - 49$

5 $m^4 + 1$

6 $16X^4 + 20a^2b^2 + 9b^2$

7 $y^4 + 23y^2 + 1$

8 $X^2 - y^2 - 6X - 6y$

9 $6m - n + 3mn - 2$

10 $X^2 - 2X - Xy + 2y$

11 $11X^3 - 6X^2 + 11X - 6$

12 $12y + 2X - 8Xy - 3$

13 $X^4 + 2X^3 - 9X^2 - 18X$

14 $m^3 + n^3 - m - n$

15 $aX + bX + b + a$

16 $45X^3 + 20X^2 + 9X + 4$

17 $X^4 + 4y^4$

18 $X^4 - 11X^2 + 1$

19 $a^4 + a^2 + b^4 - b^8$

20 $K^5 + 5K^3 + 9K$

21 $4X^2 (4X^2 - 7y^2) + y^4$

Q4 : Find the solution set of each of the following equations in R :

1 $X^2 + 12X + 15 = 0$

2 $X^3 + X^2 - 4X = 4$

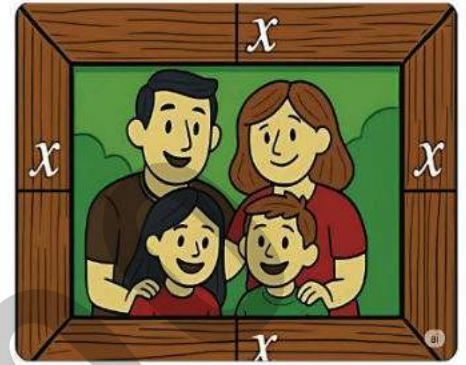
Q5 : analysis and integration of materials:

A picture is surrounded by a frame of thickness x inches, as shown in the figure.

If the area of the picture is:

$(4x^3 + 6x^2 + 2x + 3)$ square inches

Find the possible dimensions of the picture and the frame together in terms of x .



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Q1 : Choose the correct answer :-

- 1 If $x(a - b) - y(a - b)$, $x - y = 10$, and $a - b = 7$, then the value is -----
(a) 3 (b) 17 (c) 51 (d) 70
- 2 What is (G.C.F.) of the terms of the polynomial $12x^2 - 8x$?
(a) 2 (b) 4 (c) $2x$ (d) $4x$
- 3 If $(x - 5)$ is one of the factors of the trinomial: $2x^2 - 7x - 15$ What is the other factor?
(a) $x + 3$ (b) $2x - 3$ (c) $2x + 3$ (d) $x - 3$
- 4 If: $3x - 2y = 6$, $2x + 3y = 5$ Find the value of: $(x^2 + 5xy - 6y^2)$
(a) 10 (b) 11 (c) 12 (d) 30
- 5 If $x - y = -2$, $x^2 - y^2 = -16$,What is the value of Y , x ?
(a) 2 (b) 4 (c) 8 (d) 16
- 6 If $x^2 - b^2 = (x - 3)(x + 3)$, What is the value of b ?
(a) ± 1 (b) ± 3 (c) ± 6 (d) ± 9
- 7 If: $x^2 + a = 12$, $x + b = 5$,What is the numerical value of the expression $(x^3 + bx^2 + ax + ab)$?
(a) 7 (b) 17 (c) 30 (d) 60
- 8 $x^2 - ax + bx - ab =$ -----
(a) $(x + a)(x + b)$ (b) $(x + a)(x - b)$ (c) $(x - a)(x + b)$ (d) $(-a)(x - b)$
- 9 when completing the square for the expression : $(x^2 + 12x)$ we add to it -----
(a) 9 (b) 36 (c) 9 (d) 36

Q2 : Answer the following :

1 Find the solution set of each of the following equations in R:

a $4x^2 + 8x = 0$

b $2x^2 - 3x = 0$

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.....

.....

2 Factor each of the following.

a $X^2 + 5Xy + 6y^2$

b $6X^2 - 21X + 18$

.....

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.....

3 Indicate which of the following quantities is a perfect square.

a $9X^2 + 15Xy + 25y^2$

b $25X^2 + 15Xy + 25y^2$

.....

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4 Solve the following equation in R :

$X^3 = 25X$

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.....

.....

5 Completely factor each of the following :-

a $6m - n + 3mn - 2$

b $12y + 2X - 8Xy - 3$

6 Find the solution set of each of the following equations in R :

$X^3 + X^2 - 4X = 4$

7 Analyze each of the following :

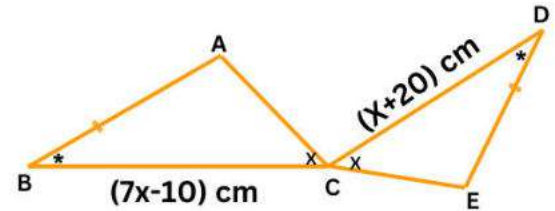
a $64X^3 - 125y^3$

b $49y^2 - 1$

Q1 : Choose the correct answer :-

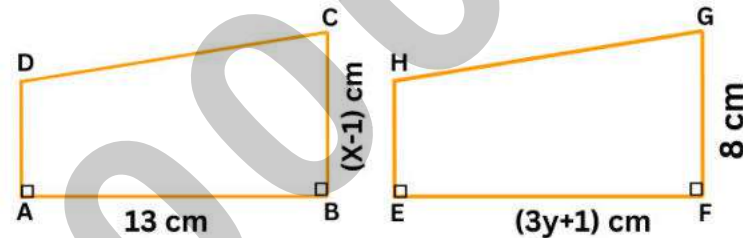
1 In the given figure :What is the length of $\overline{BC}$?

- (a) 5 cm (b) 7 cm
(c) 20 cm (d) 25 cm



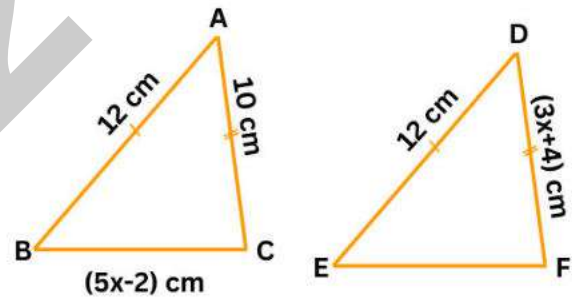
2 In the given figure :If polygon EFGH is an image of polygon ABCD by a translation , What is the value of $X+Y$?

- (a) 16 (b) 9
(c) 4 (d) 13



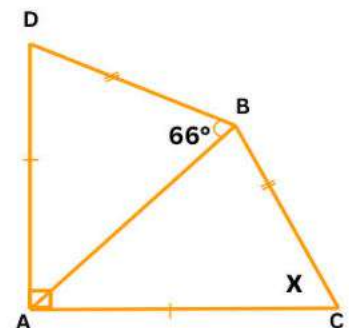
3 In the given figure :What is the length of $\overline{EF}$?

- (a) 6 cm (b) 10 cm
(c) 8 cm (d) 12 cm



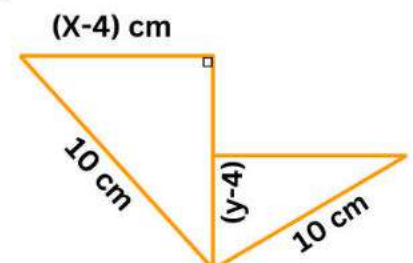
4 In the following figure :What is the value of X ?

- (a) 66 (b) 69
(c) 45 (d) 34



5 In the following figure :What is the value of $X-Y$?

- (a) 9 (b) 5
(c) 6 (d) 1

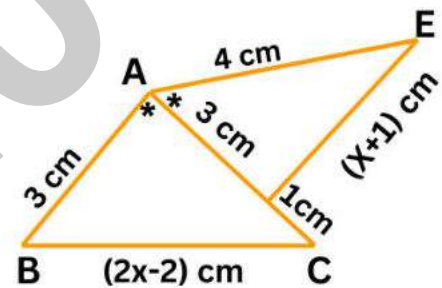


Q2 : Complete the following :

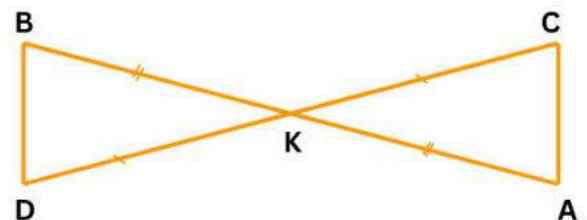
- 1 Two triangle are congruent if each ----- in one triangle is equal to its corresponding one in the other triangle.
- 2 Two triangles are congruent if two sides and the ----- are equal in both triangles.
- 3 Two right-angled triangles are congruent if the ----- are equal in both triangle.
- 4 Two triangles are congruent if two angles and the ----- in one triangle are equal to their corresponding parts in the other triangle.

Q3 : Answer the following :

- 1 In the given figure:
prove that :
 $\triangle ABC \cong \triangle ADE$

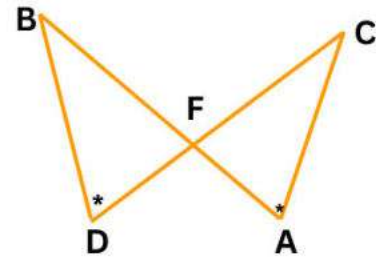


- 2 In the given figure:
 $BK = AK$, $AB \cap CD = \{K\}$, $DK = CK$
Are $\triangle AKC$ and $\triangle BKD$ congruent ? Why ?



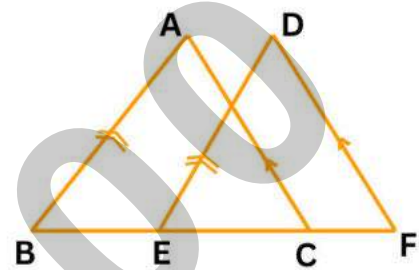
3 In the given figure:

$\angle A = \angle D$, $DF = AF$, $\overline{AB} \cap \overline{CD} = \{F\}$
Are $\triangle ACF$ and $\triangle DBF$ congruent > Why?
Then deduce that : $BF = CF$



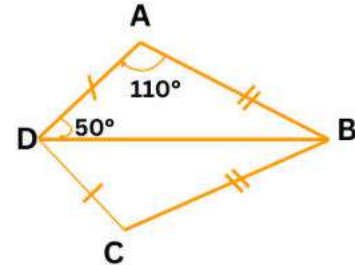
4 In the given figure:

$\overline{BA} \parallel \overline{ED}$, $\overline{CA} \parallel \overline{FD}$ $\overline{BE} \cong \overline{FC}$
Prove that:
 $\triangle ABC \cong \triangle DEF$



5 In the given figure:

$DC = AD$, $BC = AB$
 $m(\angle BAD) = 110^\circ$, $m(\angle ADB) = 30^\circ$
Find $m(\angle ABC)$

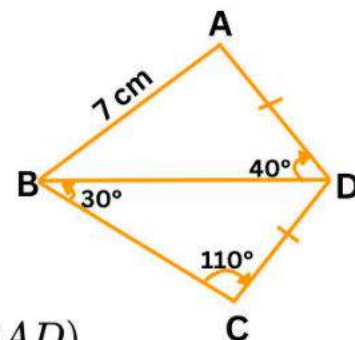


6 In the given figure :

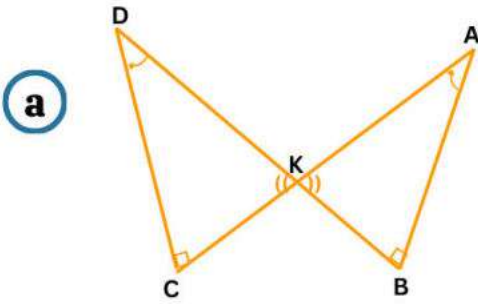
$m(\angle ABD) = 40^\circ$, $CD = DA$
 $m(\angle BCD) = 110^\circ$, $m(\angle DBC) = 30^\circ$
 $AB = 7cm$

Find:

- a) The length of BC b) The measure of $m(\angle BAD)$



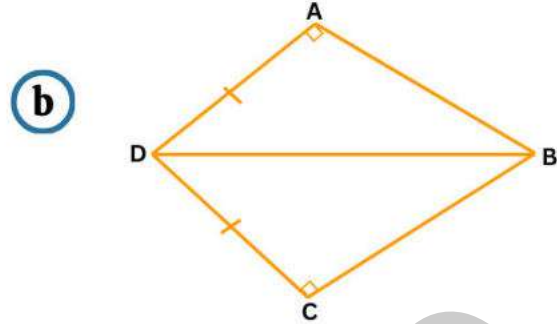
6 In each of the following figures, determine whether the two triangles are congruent or not. If they are congruent, state the congruence rule.



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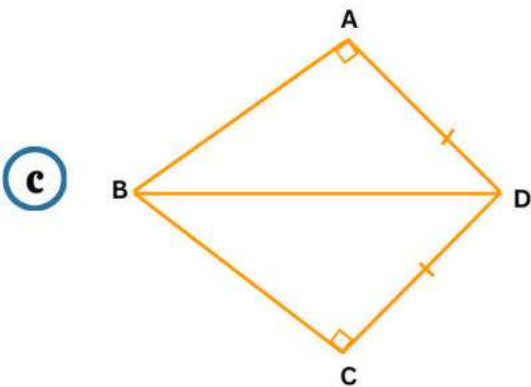
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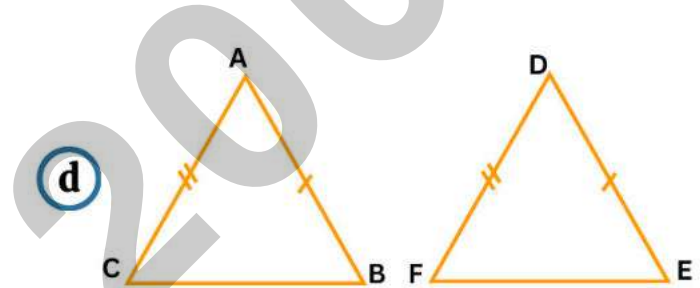
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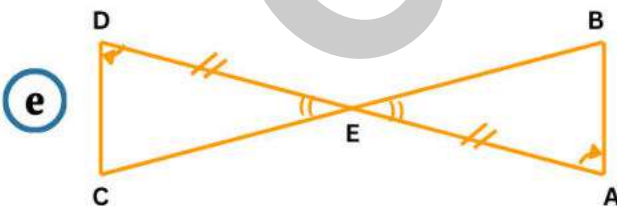
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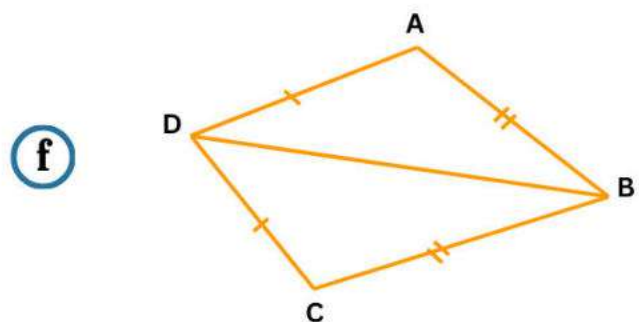
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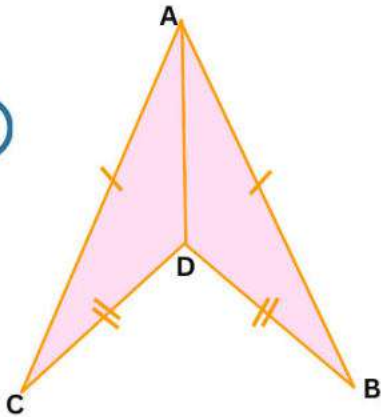


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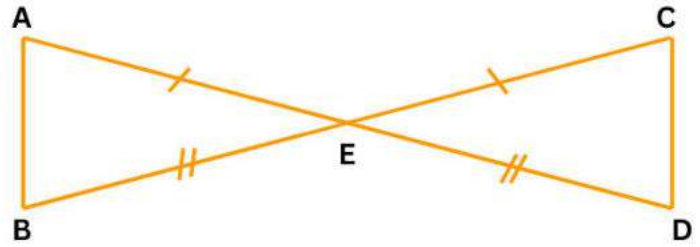
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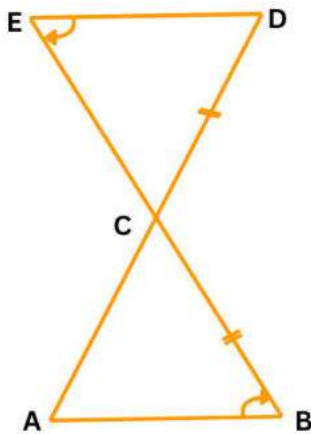
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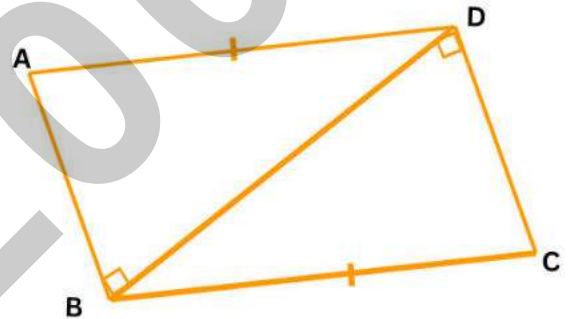
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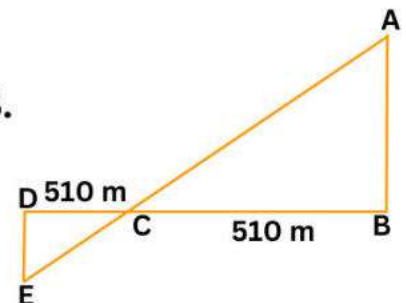
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7 To build a bridge like AB over a river ,
you need to find the distance from point A to point B.
Points E , C and A lie on the same straight line as
shown in the figure. If DE =600 ,
What is the distance from point A to point B



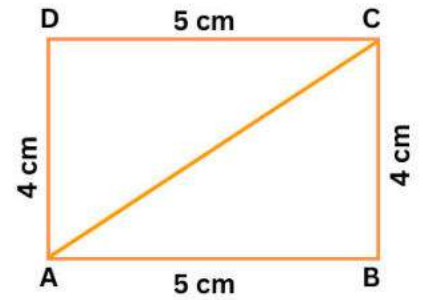
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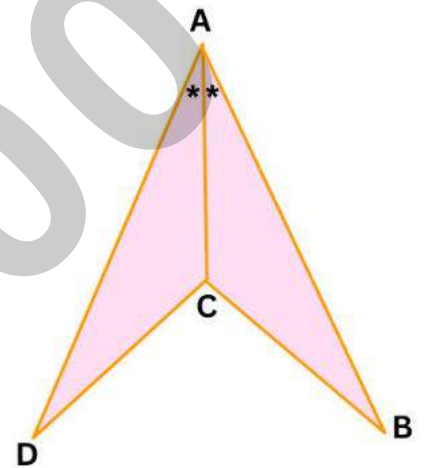
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8 what is the congruence rule used to prove that the triangles are congruent in each of the following cases ?

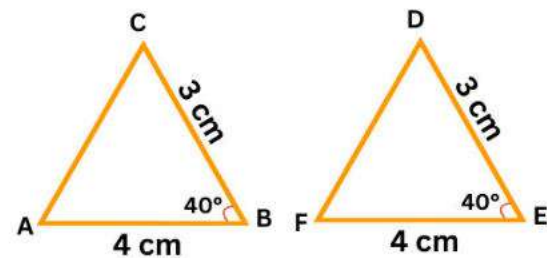
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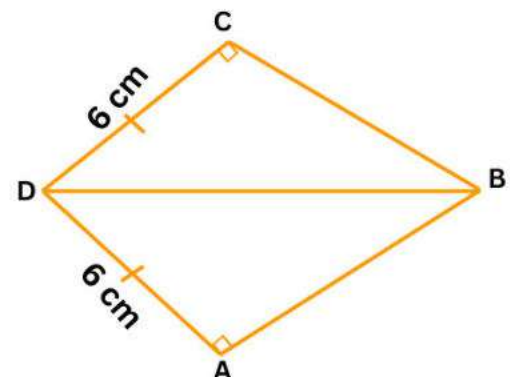
b



c



d



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

